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ABSTRACT

Large thermal stresses are avoided and the fuel charge reduced in a vaporizer particularly suited for use in a reformer type fuel cell system and having a construction that includes alternating fuel/water flow path defining cells (68) and hot gas flow path cells (69) by providing heat transfer augmentation, such as a lanced and offset fin (120), only in that part of the gas flow path structure (69) adjacent the regions in the fuel/water flow path cells (68) where heating of the liquid fuel/water and vaporizing of the fuel/water where the mixture exists is a two phase material occurs and not in the area adjacent those parts of the fuel/water flow path structure (68) in which superheating of the vaporized fuel/water mixture is occurring.